

# M M W R

MORBIDITY AND MORTALITY WEEKLY REPORT

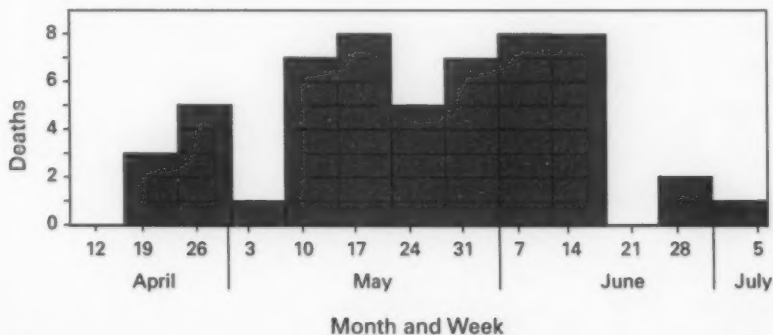
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## Deaths Among Children During an Outbreak of Hand, Foot, and Mouth Disease — Taiwan, Republic of China, April–July 1998

During April–July 1998, the Ministry of Health in Taiwan received approximately 90,000 reports of hand, foot, and mouth disease (HFMD) among young children based on passive surveillance from sentinel physicians. Approximately 320 children have been hospitalized with HFMD associated with suspected meningitis, encephalitis, or acute flaccid paralysis (AFP), and at least 55 have died. This report describes the clinical course of two fatal cases and presents summary findings from an ongoing clinical, epidemiologic, and laboratory investigation of the 55 deaths (Figure 1).

A case was defined as refractory shock following a prodromal acute illness characterized by fever or rash that resulted in the death of a previously healthy child. Cases of HFMD have been reported from all regions of Taiwan, including Taipei City, with most reported from the central and northern regions.

**FIGURE 1. Number of deaths among children\* during an outbreak of hand, foot, and mouth disease, by month and week of hospital admission — Taiwan, Republic of China, April–July 1998**



\*N=55.

*Hand, Foot, and Mouth Disease — Continued***Case Reports**

**Case 1.** On June 5, fever and headache developed in a 7-year-old girl from Taipei City. On June 6, she vomited and complained of tinnitus but was mentally alert. On June 8, she was admitted to a local hospital for suspected aseptic meningitis with a temperature of 102.6 F (39.2 C), nuchal rigidity, tonsillar enlargement, and a vesicular rash on the soles of her feet. Laboratory findings included a white blood cell (WBC) count of 14,300/mm<sup>3</sup> (normal: 3900/mm<sup>3</sup>–10,600/mm<sup>3</sup>), a hemoglobin of 12.3 gm/dL (normal: 12–16 gm/dL), and a platelet count of 344,000/mm<sup>3</sup> (normal: 150,000–400,000/mm<sup>3</sup>). There was no evidence of cerebral edema by computerized tomography scan. Following a lumbar puncture, cerebrospinal fluid (CSF) examination showed a WBC count of 153/mm<sup>3</sup> ([normal: 0–5/mm<sup>3</sup>]; differential, 70% neutrophils), a protein of 43 mg/dL (normal: 8–32 mg/dL), and a glucose level of 76 mg/dL (normal: 50–80 mg/dL). Approximately 10 hours after admission, the patient coughed up blood-tinged sputum and perioral cyanosis, tachypnea, and coarse rhonchi were observed. A chest radiograph revealed dense, bilateral pulmonary infiltrates. She was intubated and mechanically ventilated and developed hypotension and bradycardia. She died June 8, following repeated attempts at cardiopulmonary resuscitation.

Autopsy findings included acute encephalomyelitis, mild interstitial pneumonitis, and pulmonary hemorrhage. No histopathologic evidence of myocarditis was detected. Neurons in areas of inflammation and tissue necrosis were positive for enterovirus 71 (EV71) using immunohistochemical staining with a monoclonal anti-EV71 antibody.

**Case 2.** On May 16, fever developed in a previously healthy 7-month-old girl from central Taiwan. On May 20, she had episodes of vomiting, respiratory distress, and a seizure. On physical examination at a local hospital, the patient was tachycardic (heart rate of >200 beats per minute) and cyanotic, with gasping respirations and bilateral coarse rhonchi. She had a temperature of 102.2 F (39.0 C). A chest radiograph showed bilateral perihilar infiltrates. Laboratory findings included peripheral WBC of 5100/mm<sup>3</sup> (84% neutrophils and 15% lymphocytes); hemoglobin, 9.3 gm/dL; and platelets, 84,000/mm<sup>3</sup>. Prothrombin time was 29.5 seconds (control: 10.8 seconds), and activated partial thromboplastin time was 45.5 seconds (normal: 20–34 seconds). Following a lumbar puncture, CSF examination revealed WBC of 205/mm<sup>3</sup> (94% lymphocytes), protein of 43 mg/dL, and glucose level of 90 mg/dL. She was intubated and received cardiovascular support with dobutamine and dopamine. Approximately 5 hours after admission, bradycardia and hypotension developed, and she required resuscitation. She died on May 21, following multiple bradycardiac episodes. Two blood cultures drawn on admission showed no growth of bacteria or fungi; viral cultures are pending. No autopsy was performed.

**Summary Findings**

All 55 previously healthy children initially developed an acute illness characterized by fever, or rash, or mouth ulcers (Table 1). Approximately 2–7 days (median: 3 days) after onset of illness, case-patients were hospitalized for rapid cardiopulmonary failure. In 41 case-patients, death occurred within 24 hours of hospitalization despite respiratory and cardiovascular support. Of the 55 children, 43 (78%) were aged <3 years (median age: 17 months; range: 3–151 months), 32 (58%) were male, and most lived in the central (27 [49%]) or northern (21 [38%]) regions of Taiwan. Reasons for seeking

*Hand, Foot, and Mouth Disease — Continued*

medical attention included respiratory distress (17 [31%]) or an altered level of consciousness (14 [25%]). Thirteen (24%) children were comatose on admission. Forty-four (80%) case-patients either died in the emergency department or were admitted directly to an intensive-care unit. All case-patients required intubation for respiratory distress during their illness. The last child who died was admitted on July 8.

EV71 was identified in the central nervous system tissue from one autopsy (case 1) and in preliminary studies was isolated from 14 specimens from the 55 case-patients. In addition, one specimen was positive for EV71 by polymerase chain reaction.

*Reported by: Ministry of Health, The Executive Yuan, Taiwan, Republic of China; clinicians and scientists from district, district teaching, and regional hospitals, Taiwan; Kaohsiung City Health Dept, Kaohsiung; Taipei City Health Dept, Taipei; Dept of Health, Taiwan Provincial Government; Academia Sinica. Infectious Disease Pathology Activity, Respiratory and Enteric Viruses Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Div of Applied Public Health Training, Epidemiology Program Office; and EIS officers, CDC.*

**TABLE 1. Number and percentage of children\* with selected signs and symptoms who died during an outbreak of hand, foot, and mouth disease—Taiwan, Republic of China, April–July, 1998**

| Characteristic               | No. | (%)  |
|------------------------------|-----|------|
| <b>Symptoms</b>              |     |      |
| Fever                        | 53  | (96) |
| Vomiting                     | 35  | (64) |
| Poor feeding                 | 27  | (49) |
| Dyspnea                      | 23  | (42) |
| Increased sleepiness         | 17  | (31) |
| Cough                        | 14  | (26) |
| Irritability                 | 11  | (20) |
| Generalized weakness         | 14  | (26) |
| Diarrhea                     | 7   | (13) |
| Rhinorrhea                   | 6   | (11) |
| <b>Signs</b>                 |     |      |
| <b>Skin/Mucous membranes</b> |     |      |
| Hand or foot rash            | 32  | (58) |
| Mouth ulcers                 | 28  | (51) |
| Herpangina                   | 8   | (15) |
| <b>Respiratory</b>           |     |      |
| Rales                        | 26  | (48) |
| Rhonchi                      | 21  | (39) |
| Retractions                  | 17  | (32) |
| <b>Cardiac</b>               |     |      |
| Central cyanosis             | 28  | (52) |
| Peripheral cyanosis          | 22  | (41) |
| <b>Neurologic</b>            |     |      |
| Somnolent or lethargic       | 24  | (44) |
| Comatose                     | 13  | (24) |
| Alert                        | 9   | (17) |
| Nuchal rigidity              | 7   | (13) |
| Seizure                      | 7   | (13) |
| Focal paralysis or weakness  | 1   | (2)  |

\* N=55.

*Hand, Foot, and Mouth Disease — Continued*

**Editorial Note:** EV71 is one of two etiologic agents of epidemic HFMD and has been associated with other febrile rash illnesses, aseptic meningitis, encephalitis, and a syndrome of AFP similar to that caused by poliovirus (1,2). This is the third known EV71 outbreak resulting in rapid clinical deterioration and death among young children; previous outbreaks primarily among children aged <3 years occurred in Bulgaria during May–September 1975 (44 cases) (3) and in Malaysia during April–June 1997 (28 cases). In Bulgaria, the outbreak was characterized by rapid onset of central nervous system disease (described as “medullary involvement”) (3); EV71 was isolated from 27 of 29 fatal cases. In Malaysia, clinical presentations were similar to the case-patients in Taiwan. The outbreak involved children who had febrile illnesses, oral ulcers, or hands or feet rash followed by rapid clinical deterioration (4). Most died within 24 hours of admission to area hospitals. Immunohistochemical evidence of EV71 infection was detected in central nervous system tissues from four of five case-patients. Other viruses isolated from Malaysian case-patients included echovirus 25, adenovirus, and coltivirus (L. Munn Sann, Malaysia Ministry of Health, personal communication, 1997).

The etiologies of the deaths in Malaysia and Taiwan are still under investigation. The epidemiologic (presence of concomitant HFMD outbreaks), clinical (presence of HFMD rash in most case-patients), and virologic (isolation of EV71 from case-patients) evidence suggest an association between EV71 infection and these deaths. However, further evidence is required to conclude that EV71 infection alone is responsible for all deaths reported from Malaysia or Taiwan. In Malaysia, various other potential causative agents were identified, and EV71 was isolated from only two of 11 specimens submitted to CDC. The EV71 isolates recovered from case-patients in Taiwan are genetically distinct from the strains from patients in Malaysia. Case-control studies are under way in Taiwan to further assess the associations between EV71 infections and rapid death and to identify other potential factors or cofactors (e.g., toxins, medicines, or environmental exposures) that might contribute to the disease process. Laboratory studies also are under way to further characterize the viral agents recovered, and clinical review of suspected cases is in progress.

Clinicians and health-care providers who encounter similar deaths among children should report cases through their local ministry of health to CDC's Respiratory and Enteric Viruses Branch, Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases; telephone (404) 639-3596.

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## Changes in Mortality From Heart Failure — United States, 1980–1995

Heart failure is a disabling chronic disease and the leading principal diagnosis for hospitalization among older adults. Among the estimated 4.8 million U.S. residents who have heart failure, 70% are aged  $\geq 60$  years (1). During the past decade, the number of hospitalizations for heart failure have increased among Medicare beneficiaries (2), and these numbers are expected to increase with progressive aging of the U.S. population even though the case-fatality rate for heart failure is high. This report summarizes trends in mortality from heart failure in the United States for 1980–1995 and presents state-specific death rates for 1995 (the most recent year for which such data are available).

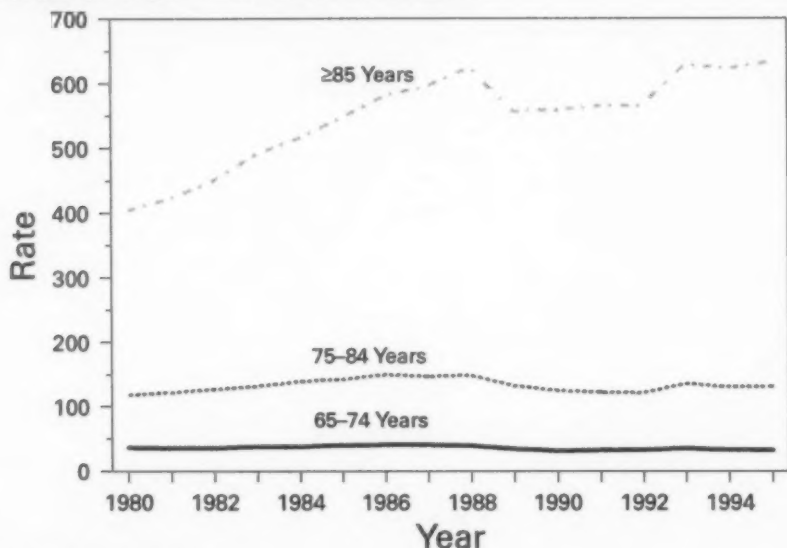
National mortality statistics are based on information from death certificates filed in state vital statistics offices and are compiled by CDC. Cause-of-death statistics are based on the underlying cause of death\* recorded on the death certificate by the attending physician, medical examiner, or coroner in a manner specified by the World Health Organization and endorsed by CDC. Population estimates from the Bureau of the Census were used to calculate death rates for the U.S. population. Heart failure deaths were defined as those for which the underlying cause of death listed on the death certificate was *International Classification of Diseases, Ninth Revision* (ICD-9), code 428. This category includes congestive heart failure (ICD-9 code 428.0), left heart failure (428.1), and unspecified heart failure (428.9). Age-adjusted estimates were standardized to the 1970 U.S. population. Race-specific rates were limited to blacks and whites because numbers for other racial/ethnic groups were too small for meaningful analysis. The average annual percentage change in mortality from 1988 through 1995 was calculated as the 1995 rate minus the 1988 rate divided by the 1988 rate divided by seven and multiplied by 100.

From 1980 to 1995, the number of deaths with heart failure as the underlying cause increased from 27,415 to 46,484; in 1995, approximately 43,600 (94%) of these deaths occurred among adults aged  $\geq 65$  years. The overall rate changed from 10.3 in 1980 to 11.7 in 1995. Death rates for heart failure per 100,000 population were directly proportionate to age. For example, in 1995, age-specific rates were 633.5 for persons aged  $\geq 85$  years, 130.8 for persons aged 75–84 years, and 32.2 for persons aged 65–74 years. The rate for persons aged  $\geq 85$  years increased during 1980–1988 but declined slightly during 1989–1992 (Figure 1). Similar small declines also were observed during the same period for adults aged 75–84 years and those aged 65–74 years.

For persons aged  $\geq 65$  years, age-adjusted death rates for heart failure increased during 1980–1988 and declined after 1988 in each racial and sex group (Figure 2). Age-adjusted rates for the U.S. population aged  $\geq 65$  years declined from 116.9 per 100,000 standard population in 1988 to 107.6 in 1995 (an average annual decline of 1.1% compared with 1988 rates). Among persons aged  $\geq 65$  years, age-adjusted rates for 1995 were 126.1 for black men, 117.0 for white men, 107.6 for black women, and 101.2 for white women. The largest average annual percentage decline compared with 1988 rates occurred among black men (3.0% per year), followed by black women (2.2%), white men (1.7%), and white women (0.5%). Because of greater declines in death rates

\*Defined by the World Health Organization's *International Classification of Diseases, Ninth Revision*, as "(a) the disease or injury which initiated the train of morbid events leading directly to death, or (b) the circumstances of the accident or violence which produced the fatal injury."

## Mortality From Heart Failure — Continued

**FIGURE 1. Age-specific death rate\* for heart failure† for persons aged  $\geq 65$  years, by age group and year — United States, 1980–1995**

\*Per 100,000 population.

†International Classification of Diseases, Ninth Revision, code 428.

for heart failure among black adults, from 1980 to 1995 the black:white ratio for men narrowed from 1.3:1 to 1.1:1 and for women from 1.4:1 to 1.1:1.

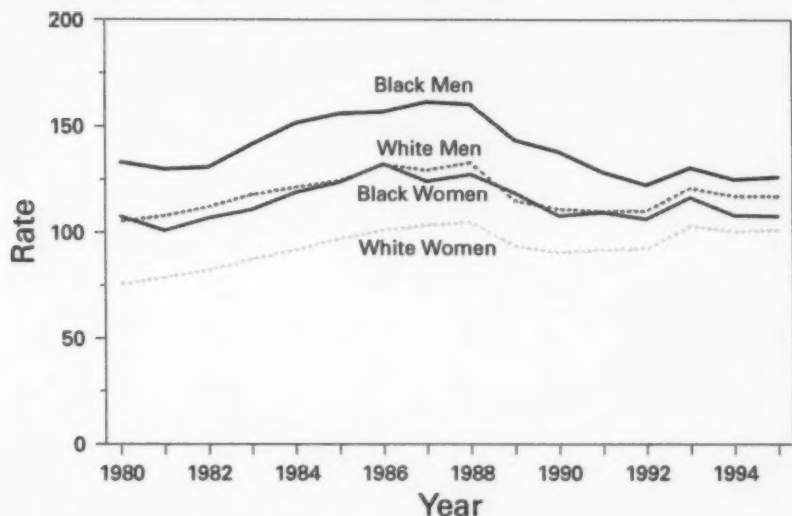
In 1995, age-adjusted death rates for heart failure among all ages varied substantially among the states and ranged from 3.4 (New Hampshire) to 29.7 (Mississippi) (Table 1). For persons aged  $\geq 65$  years, age-adjusted rates for 1995 ranged from 30.7 (New Hampshire) to 255.6 (Alabama).

Reported by: GA Haldeman, A Rashidee, R Horswell, Louisiana Health Care Review, Inc., Baton Rouge, Louisiana. Cardiovascular Health Br, Div of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

**Editorial Note:** The findings in this report are consistent with a previously observed increase in age-adjusted death rates for heart failure during 1980–1988 (3) that was followed by a decline after 1988. The decline suggests improved survival of older adults with heart failure or misdiagnosis of the underlying cause of death among adults with heart failure. For example, heart failure is five to six times more likely to be reported as a contributor rather than as the underlying cause of death on the death certificate.

Adults who survive a myocardial infarction or other hypertension-related diseases remain at increased risk for heart failure as they age. Among Medicare beneficiaries who are hospitalized for heart failure, hypertension is the secondary condition most commonly observed among black adults, and coronary heart disease is most

## Mortality From Heart Failure — Continued

**FIGURE 2. Age-adjusted death rate\* for heart failure† for persons aged ≥65 years, by race,‡ sex, and year — United States, 1980–1995**

\*Per 100,000 population, standardized to the 1970 Bureau of the Census population aged ≥65 years.

†*International Classification of Diseases, Ninth Revision, code 428.*

‡Data for racial/ethnic groups other than blacks and whites were too small for meaningful analysis.

common among white adults (2). Declines in death rates for heart failure during 1988–1995 among black adults and white men may reflect improved early detection of and changes in the therapeutic management of patients with hypertension (4), myocardial infarction (5), and heart failure (6–9). Since 1988, declines in death rates were greater among black adults than among white adults. Narrowing of the black-white ratio for heart failure mortality may reflect improved control of hypertension and access to medical care among older black adults.

Low numbers of deaths in some states should be interpreted with caution because they may reflect random variation. However, variations by state in death rates for heart failure also may reflect regional differences in the prevalence and treatment of predisposing conditions (e.g., hypertension, myocardial infarction, and other heart diseases) and variations in access to early diagnosis and therapeutic management of heart failure. Medical specialty differences in treating heart failure (9) and state variations in mortality from heart failure suggest that national professional education initiatives may be needed to ensure that the clinical practice guidelines for evaluation and care of patients with heart failure are followed appropriately by all physicians to improve survival and reduce the risk for hospitalization through consistent pharmacologic management of this condition. Peer review organizations in states such as Louisiana (10) have begun to assess statewide practices of evaluating and treating

## Mortality From Heart Failure — Continued

**TABLE 1. Number of deaths from, and age-adjusted rates for heart failure,\* overall† and among persons aged ≥65 years,‡ by state — United States, 1995**

| State                | All ages      |             | Persons aged ≥65 years |              |
|----------------------|---------------|-------------|------------------------|--------------|
|                      | No.           | Rate        | No.                    | Rate         |
| Alabama              | 1,825         | 28.8        | 1,668                  | 255.6        |
| Alaska               | 34            | 12.3        | 29                     | 114.1        |
| Arizona              | 463           | 7.4         | 431                    | 67.3         |
| Arkansas             | 1,077         | 25.1        | 1,007                  | 226.0        |
| California           | 2,277         | 5.5         | 2,148                  | 52.0         |
| Colorado             | 643           | 13.9        | 615                    | 132.6        |
| Connecticut          | 591           | 9.9         | 565                    | 93.8         |
| Delaware             | 124           | 12.4        | 114                    | 111.3        |
| District of Columbia | 101           | 11.9        | 88                     | 96.8         |
| Florida              | 1,150         | 3.7         | 1,099                  | 34.5         |
| Georgia              | 1,405         | 17.1        | 1,277                  | 154.4        |
| Hawaii               | 87            | 5.5         | 78                     | 46.9         |
| Idaho                | 234           | 14.3        | 227                    | 137.8        |
| Illinois             | 2,619         | 14.6        | 2,460                  | 134.0        |
| Indiana              | 1,548         | 17.5        | 1,475                  | 165.3        |
| Iowa                 | 202           | 3.6         | 200                    | 33.0         |
| Kansas               | 811           | 16.8        | 780                    | 157.8        |
| Kentucky             | 1,222         | 21.8        | 1,127                  | 196.6        |
| Louisiana            | 932           | 16.9        | 826                    | 146.2        |
| Maine                | 276           | 12.9        | 264                    | 119.7        |
| Maryland             | 660           | 10.2        | 614                    | 94.4         |
| Massachusetts        | 1,551         | 13.8        | 1,502                  | 132.6        |
| Michigan             | 1,804         | 12.9        | 1,706                  | 121.5        |
| Minnesota            | 884           | 11.1        | 864                    | 107.4        |
| Mississippi          | 1,124         | 29.7        | 987                    | 247.6        |
| Missouri             | 1,252         | 13.4        | 1,173                  | 121.3        |
| Montana              | 214           | 15.3        | 204                    | 142.3        |
| Nebraska             | 534           | 18.3        | 495                    | 159.5        |
| Nevada               | 291           | 17.3        | 265                    | 158.3        |
| New Hampshire        | 56            | 3.4         | 52                     | 30.7         |
| New Jersey           | 1,225         | 9.7         | 1,156                  | 89.0         |
| New Mexico           | 250           | 11.8        | 231                    | 108.8        |
| New York             | 2,272         | 7.7         | 2,148                  | 71.0         |
| North Carolina       | 1,048         | 10.3        | 964                    | 93.7         |
| North Dakota         | 176           | 13.4        | 172                    | 129.6        |
| Ohio                 | 2,203         | 12.4        | 2,100                  | 118.0        |
| Oklahoma             | 1,087         | 19.8        | 1,021                  | 181.5        |
| Oregon               | 619           | 11.6        | 595                    | 109.5        |
| Pennsylvania         | 2,940         | 13.1        | 2,802                  | 122.0        |
| Rhode Island         | 66            | 3.5         | 63                     | 32.4         |
| South Carolina       | 702           | 15.1        | 628                    | 131.8        |
| South Dakota         | 197           | 13.5        | 190                    | 127.1        |
| Tennessee            | 504           | 6.7         | 458                    | 58.6         |
| Texas                | 2,764         | 12.4        | 2,517                  | 112.5        |
| Utah                 | 335           | 16.1        | 320                    | 155.1        |
| Vermont              | 98            | 10.3        | 97                     | 102.9        |
| Virginia             | 1,276         | 15.3        | 1,175                  | 140.4        |
| Washington           | 786           | 10.1        | 757                    | 97.2         |
| West Virginia        | 551           | 17.0        | 529                    | 161.8        |
| Wisconsin            | 1,304         | 14.7        | 1,252                  | 138.1        |
| Wyoming              | 84            | 12.9        | 81                     | 123.4        |
| <b>Total</b>         | <b>46,484</b> | <b>11.7</b> | <b>43,596</b>          | <b>107.6</b> |

\* International Classification of Diseases, Ninth Revision, code 428.

† Per 100,000 population; standardized to the 1970 Bureau of the Census population.

‡ Per 100,000 population; standardized to the 1970 Bureau of the Census population aged ≥65 years.

*Mortality From Heart Failure — Continued*

heart failure as the first stage for implementing standardized quality improvement efforts that will target the hospital care of all Medicare patients with heart failure.

Historically, the treatment of heart failure included combinations of diuretics and digitalis. Guidelines for clinical practice (7,8) recommend a trial of angiotensin-converting enzyme (ACE) inhibitors for heart failure patients with left ventricular systolic dysfunction (i.e., an ejection fraction of  $\leq 40\%$ ), unless specific contraindications exist, and use of diuretics for patients with volume overload. Digoxin should be initiated with ACE inhibitors and diuretics in patients with severe heart failure and should be added in patients who remain symptomatic despite optimal management with ACE inhibitors and diuretics.

Although mortality for heart failure is declining, an increasing number of older adults with heart failure will have a substantial impact on national health-care resources and expenditures. Despite potential progress in the treatment of heart failure, public health and clinical efforts should continue to target the prevention and treatment of high blood pressure and acute myocardial infarction—the two major, preventable underlying conditions associated with increased risk for heart failure. Primary prevention of heart failure includes adherence to everyday health practices associated with preventing hypertension and myocardial infarction (e.g., reduced dietary fat and/or sodium intake, moderate alcohol intake, weight maintenance, regular physical activity, and nonsmoking or smoking cessation). In addition, adults with hypertension should control blood pressure levels by improving daily health practices and using antihypertensive medications to prevent the development of heart failure.

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### Outbreak Notice

#### **Outbreak of Influenza A Infection — Alaska and the Yukon Territory, June–July 1998**

Since July 26, CDC and Health Canada, in cooperation with local public health authorities, have been investigating reports of febrile respiratory illness and associated pneumonia among persons traveling on land and sea, both independently and on tour packages, in Alaska and the Yukon Territory. Commonly reported symptoms include fever and cough, and laboratory evidence suggests that influenza A infection may be a cause of many of the illnesses. Summertime outbreaks of Influenza A have previously been reported among tourists in the United States and Canada (1,2). No evidence suggests increased respiratory illness activity among residents of these areas.

From June 5 through August 4, 1998, a total of 419 cases of acute respiratory infection (ARI), including 20 cases of pneumonia during June–July, have been reported to the investigation team in Anchorage. No deaths have been reported. The median age of persons with ARI is 63 years (range: 3–88 years); the median age of persons with pneumonia is 74 years (range: 61–88 years). Many cases have occurred in clusters, particularly among groups of 40–50 passengers sharing common transportation and accommodation packages on overland tours between Anchorage and Skagway or Anchorage and Seward during June–July. Affected passengers have traveled on several different tours from different companies. Information from case reports suggests that after touring inland, ill persons are boarding cruise ships, possibly resulting in further spread. In some instances, travelers are becoming ill and seeking medical attention for their respiratory illnesses only after returning home.

During June–September, approximately 70,000 overland tour and cruise ship passengers visit Alaska and the Yukon Territory each week. Most do not experience febrile respiratory illness. No special prevention measures are recommended at this time for travelers in good health.

Systematic surveillance for febrile respiratory illness and pneumonia is being initiated by CDC, Health Canada, and other public health officials in the region to better define the scope of the outbreak. Health-care providers who see patients with febrile respiratory illness and/or pneumonia should obtain a travel history and consider influenza A in the differential diagnosis for those with recent travel to Alaska or the Yukon Territory. Additional cases should be reported to CDC's Special Investigation Team; telephone (907) 729-3431; fax (907) 729-3429; or e-mail, SITEAM@cdc.gov.

*Reported by: Alaska Dept of Health and Social Svcs; Bur of Infectious Diseases and Office of Special Health Initiatives, Laboratory Center for Disease Control, Occupational Health and Safety Agency, Health Canada, Ottawa. Arctic Investigations Program, Div of Viral and Rickettsial Diseases and Div of Quarantine, National Center for Infectious Diseases; and EIS officers, CDC.*

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### Notice to Readers

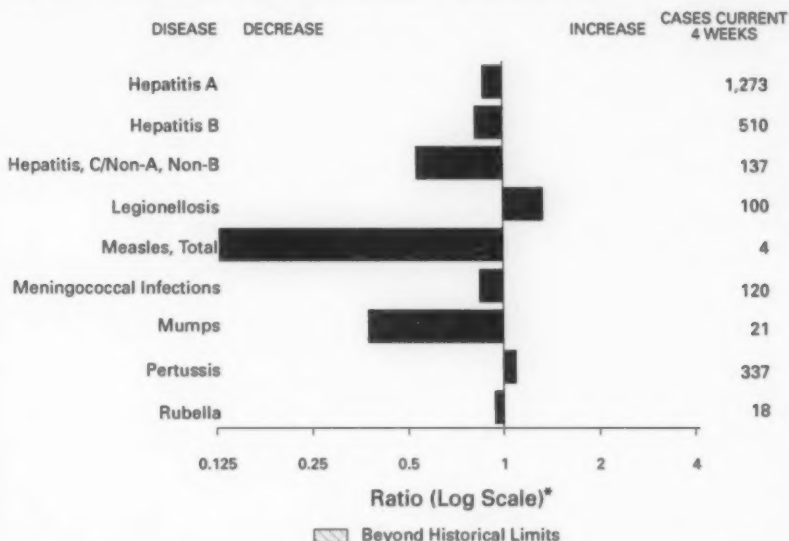
#### **Satellite Broadcast on Women with Cervicitis and Pelvic Inflammatory Disease**

*Caring for Women: Management and Prevention of Cervicitis and Pelvic Inflammatory Disease*, a live interactive satellite broadcast, will be presented to sites nationwide Wednesday, October 7, 1998, from 12:30 p.m. to 3 p.m. eastern standard time. Cosponsors are CDC and the New England and Seattle Sexually Transmitted Disease/Human Immunodeficiency Virus Prevention and Training Centers. This program is designed for physicians, nurse practitioners, nurse midwives, physician assistants, and registered nurses who provide care for women.

The program will address the etiology, diagnosis, and management of cervicitis; choice of appropriate laboratory work up, treatment, and follow-up of pelvic inflammatory disease (PID); role of new diagnostic technologies in detecting *Chlamydia trachomatis* in the management of cervicitis and PID; and identification of screening strategies in preventing cervicitis and PID.

Information about registration, satellite coordinates, and Continuing Medical Education and Continuing Education Units is available from the Prevention Training Center in each public health region: Region I (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont), telephone (617) 983-6945; Region II (New Jersey, New York, Puerto Rico, and Virgin Islands), telephone (518) 474-1692; Region III (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia), telephone (410) 396-4448; Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee), telephone (205) 930-1196; Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin), telephone (513) 558-3197; Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas), telephone (214) 819-1947; Region VII (Iowa, Kansas, Missouri, and Nebraska), telephone (314) 747-0294; Region VIII (Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming), telephone (303) 436-7226; Region IX (Arizona, California, Hawaii, and Nevada), telephone (415) 554-9630; and Region X (Alaska, Idaho, Oregon, and Washington), telephone (206) 685-9850.



**FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending August 1, 1998, with historical data — United States**

\*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**TABLE I. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending August 1, 1998 (30th Week)**

|  | Cum. 1998 |   | Cum. 1998 |
|--|-----------|---|-----------|
| Anthrax                                    | -         | Plague                                  | 4         |
| Brucellosis                                | 43        | Poliomyelitis, paralytic                | 1         |
| Cholera                                    | 6         | Psittacosis                             | 30        |
| Congenital rubella syndrome                | 3         | Rabies, human                           | -         |
| Cryptosporidiosis*                         | 1,097     | Rocky Mountain spotted fever (RMSF)     | 136       |
| Diphtheria                                 | 2         | Streptococcal disease, invasive Group A | 1,409     |
| Encephalitis: California*                  | 13        | Streptococcal toxic-shock syndrome*     | 37        |
| eastern equine*                            | -         | Syphilis, congenital**                  | 178       |
| St. Louis*                                 | -         | Tetanus                                 | 20        |
| western equine*                            | -         | Toxic-shock syndrome                    | 74        |
| Hansen Disease                             | 68        | Trichinosis                             | 6         |
| Hantavirus pulmonary syndrome*†            | 7         | Typhoid fever                           | 172       |
| Hemolytic uremic syndrome, post-diarrheal* | 30        | Yellow fever                            | -         |
| HIV infection, pediatric‡                  | 127       |   |           |

-no reported cases

\*Not notifiable in all states.

† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).

‡ Updated monthly to the Division of HIV/AIDS Prevention-Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update June 28, 1998.

§ Updated from reports to the Division of STD Prevention, NCHSTP.

**TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending August 1, 1998, and July 26, 1997 (30th Week)**

| Reporting Area | AIDS       |           | Chlamydia |           | Escherichia coli O157:H7 |           | Gonorrhea |           | Hepatitis C/NA, NB |           |
|----------------|------------|-----------|-----------|-----------|--------------------------|-----------|-----------|-----------|--------------------|-----------|
|                |            |           |           |           | NETSS <sup>1</sup>       |           |           |           |                    |           |
|                | Cum. 1998* | Cum. 1997 | Cum. 1998 | Cum. 1997 | Cum. 1998                | Cum. 1997 | Cum. 1998 | Cum. 1997 | Cum. 1998          | Cum. 1997 |
| UNITED STATES  | 23,929     | 33,453    | 304,939   | 258,173   | 1,239                    | 677       | 178,219   | 161,549   | 2,192              | 1,981     |
| NEW ENGLAND    | 830        | 1,454     | 11,492    | 9,800     | 165                      | 122       | 3,208     | 3,325     | 31                 | 41        |
| Maine          | 18         | 36        | 562       | 567       | 21                       | -         | 39        | 33        | -                  | -         |
| N.H.           | 22         | 19        | 543       | 444       | 23                       | 25        | 52        | 62        | -                  | -         |
| Vt.            | 10         | 24        | 234       | 223       | 8                        | 6         | 20        | 31        | -                  | 2         |
| Mass.          | 386        | 626       | 4,830     | 4,077     | 87                       | 75        | 1,182     | 1,272     | 28                 | 32        |
| R.I.           | 67         | 63        | 1,380     | 1,103     | 5                        | 1         | 205       | 280       | 3                  | 7         |
| Conn.          | 327        | 766       | 3,923     | 3,386     | 21                       | 15        | 1,710     | 1,667     | -                  | -         |
| MID. ATLANTIC  | 6,951      | 10,621    | 37,961    | 31,581    | 125                      | 27        | 21,130    | 20,213    | 229                | 189       |
| Upstate N.Y.   | 849        | 1,726     | N         | N         | 92                       | -         | 3,378     | 3,479     | 177                | 140       |
| N.Y. City      | 3,910      | 5,486     | 20,945    | 15,186    | 4                        | 6         | 8,916     | 7,551     | -                  | -         |
| N.J.           | 1,232      | 2,086     | 6,152     | 5,581     | 29                       | 20        | 3,724     | 4,332     | -                  | -         |
| Pa.            | 960        | 1,311     | 10,864    | 10,814    | N                        | 1         | 5,112     | 5,061     | 52                 | 49        |
| E.N. CENTRAL   | 1,768      | 2,318     | 48,771    | 34,452    | 203                      | 119       | 33,313    | 21,715    | 294                | 352       |
| Ohio           | 331        | 465       | 13,605    | 12,576    | 49                       | 22        | 8,344     | 8,033     | 7                  | 11        |
| Ind.           | 326        | 390       | 3,326     | 5,046     | 57                       | 27        | 2,120     | 3,371     | 4                  | 10        |
| Ill.           | 706        | 768       | 13,951    | U         | 46                       | -         | 11,264    | U         | 16                 | 60        |
| Mich.          | 305        | 544       | 12,282    | 10,649    | 51                       | 27        | 9,302     | 7,734     | 267                | 251       |
| Wis.           | 100        | 151       | 5,607     | 6,181     | N                        | 43        | 2,283     | 2,577     | -                  | 20        |
| W.N. CENTRAL   | 444        | 656       | 17,893    | 18,006    | 169                      | 121       | 8,963     | 8,077     | 120                | 40        |
| Minn.          | 65         | 99        | 3,487     | 3,747     | 59                       | 51        | 1,240     | 1,313     | 7                  | 3         |
| Iowa           | 40         | 69        | 2,063     | 2,650     | 51                       | 25        | 680       | 720       | 12                 | 20        |
| Mo.            | 209        | 332       | 6,787     | 6,893     | 15                       | 21        | 5,127     | 4,358     | 96                 | 5         |
| N. Dak.        | 4          | 6         | 290       | 483       | 2                        | 9         | 29        | 32        | -                  | 2         |
| S. Dak.        | 9          | 3         | 925       | 707       | 8                        | 10        | 146       | 77        | -                  | -         |
| Nebr.          | 39         | 50        | 1,288     | 1,115     | 19                       | -         | 453       | 431       | 2                  | 2         |
| Kans.          | 60         | 88        | 3,043     | 2,611     | 15                       | 5         | 1,308     | 1,146     | 3                  | 8         |
| S. ATLANTIC    | 5,900      | 8,325     | 62,770    | 53,914    | 108                      | 70        | 50,677    | 52,500    | 110                | 134       |
| Del.           | 75         | 146       | 1,438     | -         | -                        | 1         | 782       | 669       | -                  | -         |
| Md.            | 718        | 1,071     | 4,908     | 4,004     | 16                       | 9         | 5,671     | 6,604     | 5                  | 4         |
| D.C.           | 481        | 614       | N         | N         | 2                        | -         | 1,997     | 2,527     | -                  | -         |
| Va.            | 425        | 715       | 6,688     | 6,782     | N                        | 25        | 3,797     | 4,648     | 7                  | 18        |
| W. Va.         | 57         | 62        | 1,561     | 1,653     | 6                        | 3         | 446       | 530       | 4                  | 12        |
| N.C.           | 390        | 503       | 12,003    | 9,744     | 18                       | 23        | 10,095    | 9,416     | 14                 | 33        |
| S.C.           | 386        | 422       | 10,784    | 7,120     | 5                        | -         | 6,591     | 6,391     | 3                  | 27        |
| Ge.            | 616        | 973       | 13,737    | 9,965     | 40                       | -         | 11,508    | 11,439    | 9                  | 3         |
| Fla.           | 2,752      | 3,820     | 11,651    | 14,626    | 21                       | 8         | 9,390     | 10,276    | 68                 | 40        |
| E.S. CENTRAL   | 936        | 1,074     | 22,691    | 19,733    | 64                       | 25        | 21,799    | 19,582    | 102                | 215       |
| Ky.            | 127        | 177       | 3,601     | 3,760     | 17                       | -         | 2,053     | 2,363     | 16                 | 10        |
| Tenn.          | 333        | 460       | 7,460     | 7,383     | 31                       | 22        | 6,362     | 6,117     | 83                 | 145       |
| Ala.           | 274        | 239       | 5,907     | 4,859     | 15                       | 2         | 7,448     | 6,633     | 3                  | 6         |
| Miss.          | 202        | 189       | 5,733     | 3,931     | U                        | 1         | 5,936     | 4,449     | U                  | 54        |
| W.S. CENTRAL   | 2,899      | 3,546     | 43,327    | 34,824    | 75                       | 12        | 24,774    | 22,541    | 540                | 259       |
| Ark.           | 104        | 130       | 1,939     | 1,691     | 6                        | 6         | 1,190     | 2,781     | 3                  | 9         |
| La.            | 512        | 610       | 8,260     | 5,106     | 3                        | 2         | 6,840     | 4,782     | 19                 | 118       |
| Okla.          | 170        | 165       | 5,753     | 4,253     | 10                       | 4         | 3,146     | 2,664     | 7                  | 5         |
| Tex.           | 2,113      | 2,641     | 27,375    | 23,774    | 58                       | -         | 13,598    | 12,334    | 511                | 127       |
| MOUNTAIN       | 831        | 941       | 12,296    | 16,416    | 161                      | 77        | 4,606     | 4,476     | 249                | 177       |
| Mont.          | 15         | 26        | 720       | 619       | 8                        | -         | 26        | 27        | 5                  | 12        |
| Idaho          | 15         | 34        | 946       | 831       | 14                       | 7         | 91        | 63        | 86                 | 34        |
| Wyo.           | 2          | 13        | 367       | 315       | 48                       | -         | 17        | 29        | 45                 | 42        |
| Colo.          | 147        | 224       | 3         | 3,617     | 34                       | 30        | 1,305     | 1,235     | 16                 | 19        |
| N. Mex.        | 130        | 80        | 2,083     | 2,190     | 15                       | 11        | 500       | 503       | 60                 | 32        |
| Ariz.          | 329        | 227       | 6,354     | 6,134     | 13                       | 13        | 2,300     | 1,951     | 3                  | 23        |
| Utah           | 65         | 90        | 1,323     | 971       | 23                       | 10        | 139       | 142       | 21                 | 3         |
| Nev.           | 128        | 257       | 500       | 1,730     | 6                        | 6         | 228       | 526       | 13                 | 12        |
| PACIFIC        | 3,370      | 4,518     | 47,748    | 39,447    | 169                      | 104       | 9,749     | 9,120     | 517                | 574       |
| Wash.          | 236        | 377       | 6,435     | 5,153     | 29                       | 22        | 1,097     | 1,093     | 11                 | 17        |
| Oreg.          | 93         | 162       | 3,303     | 2,795     | 43                       | 41        | 464       | 429       | 2                  | 2         |
| Calif.         | 2,962      | 3,914     | 35,628    | 29,711    | 95                       | 35        | 7,748     | 7,093     | 449                | 468       |
| Alaska         | 12         | 28        | 1,107     | 809       | 2                        | -         | 182       | 224       | 1                  | -         |
| Hawaii         | 67         | 37        | 1,275     | 979       | N                        | 6         | 258       | 281       | 54                 | 97        |
| Guam           | -          | 2         | 8         | 193       | N                        | -         | 2         | 27        | -                  | -         |
| P.R.           | 1,001      | 1,019     | U         | U         | -                        | U         | 230       | 389       | -                  | -         |
| V.I.           | 17         | 57        | N         | N         | N                        | U         | U         | U         | U                  | U         |
| Amer. Samoa    | -          | -         | U         | U         | N                        | U         | U         | U         | U                  | U         |
| C.N.M.I.       | -          | 1         | N         | N         | N                        | U         | 14        | 17        | -                  | 2         |

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

\*Updated monthly to the Division of HIV/AIDS Prevention-Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update June 28, 1998.

<sup>1</sup>National Electronic Telecommunications System for Surveillance.

<sup>2</sup>Public Health Laboratory Information System.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending August 1, 1998, and July 26, 1997 (30th Week)

| Reporting Area | Legionellosis |           | Lyme Disease |           | Malaria   |           | Syphilis (Primary & Secondary) |           | Tuberculosis |           | Rabies, Animal |
|----------------|---------------|-----------|--------------|-----------|-----------|-----------|--------------------------------|-----------|--------------|-----------|----------------|
|                | Cum. 1998     | Cum. 1997 | Cum. 1998    | Cum. 1997 | Cum. 1998 | Cum. 1997 | Cum. 1998                      | Cum. 1997 | Cum. 1998*   | Cum. 1997 | Cum. 1998      |
| UNITED STATES  | 636           | 493       | 5,109        | 4,058     | 671       | 945       | 4,118                          | 4,784     | 7,488        | 9,180     | 3,996          |
| NEW ENGLAND    | 36            | 35        | 1,701        | 855       | 41        | 45        | 41                             | 97        | 249          | 250       | 769            |
| Maine          | 1             | 1         | 6            | 7         | 4         | 1         | 1                              | -         | 4            | 16        | 121            |
| N.H.           | 3             | 4         | 27           | 7         | 3         | 2         | 1                              | -         | 6            | 9         | 37             |
| Vt.            | 3             | 6         | 6            | 3         | -         | 2         | 4                              | -         | 1            | 3         | 33             |
| Mass.          | 13            | 10        | 332          | 183       | 14        | 21        | 24                             | 46        | 135          | 138       | 254            |
| R.I.           | 8             | 5         | 165          | 123       | 2         | 5         | 1                              | 2         | 34           | 17        | 44             |
| Conn.          | 8             | 9         | 1,165        | 532       | 18        | 14        | 10                             | 49        | 89           | 67        | 280            |
| MID. ATLANTIC  | 142           | 84        | 2,771        | 2,429     | 159       | 292       | 146                            | 238       | 1,474        | 1,750     | 914            |
| Upstate N.Y.   | 43            | 23        | 1,712        | 921       | 48        | 43        | 18                             | 24        | 177          | 225       | 638            |
| N.Y. City      | 19            | 7         | 10           | 111       | 71        | 182       | 32                             | 50        | 846          | 907       | U              |
| N.J.           | 7             | 14        | 497          | 759       | 22        | 50        | 53                             | 99        | 331          | 353       | 112            |
| Pa.            | 73            | 40        | 552          | 638       | 18        | 17        | 43                             | 65        | 120          | 285       | 164            |
| E.N. CENTRAL   | 200           | 170       | 50           | 198       | 56        | 96        | 534                            | 363       | 805          | 1,011     | 76             |
| Ohio           | 82            | 72        | 40           | 16        | 3         | 12        | 76                             | 122       | U            | 173       | 40             |
| Ind.           | 38            | 29        | 8            | 15        | 6         | 9         | 124                            | 94        | 76           | 85        | 5              |
| Ill.           | 14            | 11        | 1            | 7         | 18        | 39        | 195                            | U         | 357          | 519       | 5              |
| Mich.          | 44            | 37        | 1            | 15        | 27        | 24        | 104                            | 72        | 172          | 168       | 19             |
| Wis.           | 22            | 21        | U            | 145       | 2         | 12        | 35                             | 75        | -            | 66        | 7              |
| W.N. CENTRAL   | 42            | 34        | 66           | 46        | 50        | 30        | 85                             | 101       | 219          | 304       | 444            |
| Minn.          | 3             | 1         | 47           | 23        | 26        | 10        | 6                              | 14        | 81           | 79        | 78             |
| Iowa           | 4             | 9         | 13           | 3         | 5         | 7         | -                              | 6         | 9            | 34        | 97             |
| Mo.            | 14            | 5         | 1            | 15        | 10        | 7         | 66                             | 57        | 86           | 121       | 69             |
| N. Dak.        | -             | 2         | -            | -         | 2         | -         | -                              | -         | 3            | 6         | 89             |
| S. Dak.        | 2             | 2         | -            | -         | -         | -         | 1                              | -         | 14           | 7         | 90             |
| Nebr.          | 15            | 12        | 3            | 2         | 1         | 1         | 4                              | 1         | 8            | 12        | 3              |
| Kans.          | 4             | 3         | 2            | 3         | 6         | 3         | 8                              | 23        | 18           | 45        | 68             |
| S. ATLANTIC    | 77            | 64        | 373          | 367       | 154       | 148       | 1,784                          | 1,910     | 1,138        | 1,861     | 1,199          |
| Del.           | 8             | 7         | 8            | 77        | 1         | 2         | 16                             | 15        | U            | 19        | 17             |
| Md.            | 19            | 14        | 267          | 231       | 50        | 49        | 407                            | 532       | 166          | 172       | 296            |
| D.C.           | 5             | 3         | 4            | 7         | 12        | 10        | 46                             | 71        | 62           | 58        | -              |
| Va.            | 8             | 13        | 31           | 18        | 25        | 40        | 96                             | 150       | 144          | 194       | 364            |
| W. Va.         | N             | N         | 6            | 1         | 1         | -         | 2                              | 3         | 25           | 30        | 51             |
| N.C.           | 6             | 8         | 25           | 20        | 12        | 8         | 436                            | 420       | 237          | 227       | 136            |
| S.C.           | 6             | 3         | 3            | 1         | 4         | 10        | 179                            | 222       | 181          | 204       | 92             |
| Ga.            | 3             | -         | 2            | 1         | 17        | 16        | 471                            | 319       | 253          | 338       | 120            |
| Fla.           | 21            | 16        | 27           | 13        | 31        | 13        | 131                            | 178       | 70           | 619       | 123            |
| E.S. CENTRAL   | 31            | 34        | 45           | 48        | 15        | 19        | 688                            | 1,052     | 370          | 741       | 159            |
| Ky.            | 16            | 7         | 10           | 9         | 2         | 5         | 67                             | 87        | -            | 106       | 23             |
| Tenn.          | 11            | 20        | 24           | 21        | 9         | 4         | 331                            | 449       | 208          | 277       | 90             |
| Ala.           | 4             | 2         | 11           | 4         | 4         | 7         | 158                            | 267       | 162          | 229       | 46             |
| Miss.          | U             | 5         | U            | 14        | U         | 3         | 132                            | 249       | U            | 129       | U              |
| W.S. CENTRAL   | 20            | 12        | 14           | 36        | 19        | 10        | 521                            | 730       | 159          | 1,441     | 111            |
| Ark.           | -             | 1         | 5            | 11        | 1         | 2         | 67                             | 107       | 64           | 118       | 21             |
| La.            | 2             | 2         | 1            | 2         | 5         | 5         | 201                            | 219       | U            | 107       | -              |
| Okla.          | 8             | 1         | 2            | 5         | 2         | 3         | 32                             | 69        | 95           | 126       | 90             |
| Tex.           | 10            | 8         | 6            | 18        | 11        | -         | 221                            | 335       | -            | 1,090     | -              |
| MOUNTAIN       | 40            | 30        | 7            | 6         | 31        | 47        | 129                            | 92        | 244          | 333       | 95             |
| Mont.          | 2             | 1         | -            | -         | -         | 2         | -                              | -         | 12           | 6         | 32             |
| Idaho          | -             | 2         | 1            | 2         | 4         | -         | -                              | -         | 8            | 7         | -              |
| Wyo.           | 1             | 1         | -            | 1         | -         | 2         | 1                              | -         | 2            | 2         | 44             |
| Colo.          | 7             | 9         | 3            | -         | 10        | 23        | 8                              | 5         | U            | 57        | 1              |
| N. Mex.        | 2             | 1         | 2            | -         | 11        | 6         | 12                             | 4         | 33           | 30        | 3              |
| Ariz.          | 10            | 7         | -            | 1         | 5         | 7         | 102                            | 72        | 124          | 153       | 9              |
| Utah           | 16            | 6         | -            | -         | 1         | 3         | 3                              | 3         | 36           | 14        | 6              |
| Nev.           | 2             | 3         | 1            | 2         | -         | 4         | 3                              | 8         | 29           | 64        | -              |
| PACIFIC        | 48            | 30        | 82           | 73        | 146       | 258       | 190                            | 201       | 3,030        | 1,489     | 229            |
| Wash.          | 8             | 6         | 4            | 2         | 14        | 9         | 23                             | 7         | 144          | 174       | -              |
| Oreg.          | -             | -         | 9            | 11        | 12        | 13        | 3                              | 5         | 71           | 95        | 1              |
| Calif.         | 39            | 23        | 68           | 60        | 118       | 228       | 164                            | 187       | 2,694        | 1,081     | 207            |
| Alaska         | -             | -         | 1            | -         | 1         | 3         | -                              | 1         | 31           | 49        | 21             |
| Hawaii         | 1             | 1         | -            | -         | 1         | 5         | -                              | 1         | 90           | 110       | -              |
| Guam           | -             | -         | -            | -         | -         | -         | -                              | 3         | -            | 13        | -              |
| P.R.           | -             | -         | -            | -         | -         | 4         | 120                            | 145       | 46           | 129       | 31             |
| V.I.           | U             | U         | U            | U         | U         | U         | U                              | U         | U            | U         | U              |
| Amer. Samoa    | U             | U         | U            | U         | U         | U         | U                              | U         | U            | U         | U              |
| C.N.M.I.       | -             | -         | -            | -         | -         | -         | 98                             | 9         | 54           | 2         | -              |

N: Not notifiable U: Unavailable -: no reported cases

\*Additional information about areas displaying "U" for cumulative 1998 Tuberculosis cases can be found in Notice to Readers, MMWR Vol. 47, No. 2, p. 39.

**TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending August 1, 1998, and July 26, 1997 (30th Week)**

| Reporting Area | H. Influenzae,<br>invasive |              | Hepatitis (Viral), by type |              |              |              | Measles (Rubeola) |      |                       |              |              |              |
|----------------|----------------------------|--------------|----------------------------|--------------|--------------|--------------|-------------------|------|-----------------------|--------------|--------------|--------------|
|                | Cum.<br>1998*              | Cum.<br>1997 | A                          |              | B            |              | Indigenous        |      | Imported <sup>d</sup> |              | Total        |              |
|                |                            |              | Cum.<br>1998               | Cum.<br>1997 | Cum.<br>1998 | Cum.<br>1997 | 1998              | 1998 | 1998                  | Cum.<br>1998 | Cum.<br>1998 | Cum.<br>1997 |
| UNITED STATES  | 648                        | 679          | 12,501                     | 15,940       | 4,614        | 5,339        | 1                 | 27   | 2                     | 19           | 46           | 95           |
| NEW ENGLAND    | 35                         | 37           | 150                        | 410          | 76           | 99           | -                 | 1    | -                     | 2            | 3            | 16           |
| Maine          | 2                          | 3            | 13                         | 45           | 2            | 6            | -                 | -    | -                     | -            | -            | -            |
| N.H.           | 7                          | 5            | 8                          | 21           | 10           | 6            | -                 | -    | -                     | -            | -            | 1            |
| Vt.            | 2                          | 3            | 13                         | 7            | 3            | 5            | -                 | -    | -                     | 1            | 1            | -            |
| Mass.          | 22                         | 23           | 46                         | 172          | 18           | 43           | -                 | 1    | -                     | 1            | 2            | 14           |
| R.I.           | 2                          | 2            | 10                         | 88           | 43           | 10           | -                 | -    | -                     | -            | -            | -            |
| Conn.          | -                          | 1            | 60                         | 77           | -            | 29           | -                 | -    | -                     | -            | -            | 1            |
| MID. ATLANTIC  | 90                         | 96           | 823                        | 1,278        | 646          | 780          | -                 | 9    | 2                     | 4            | 13           | 21           |
| Upstate N.Y.   | 36                         | 25           | 195                        | 181          | 179          | 161          | -                 | 2    | -                     | -            | 2            | 7            |
| N.Y. City      | 18                         | 26           | 210                        | 580          | 173          | 292          | -                 | -    | -                     | -            | -            | 7            |
| N.J.           | 31                         | 31           | 196                        | 187          | 105          | 152          | -                 | 7    | -                     | 1            | 8            | 3            |
| Pa.            | 5                          | 14           | 222                        | 330          | 189          | 175          | -                 | -    | 2                     | 3            | 3            | 6            |
| E.N. CENTRAL   | 99                         | 114          | 1,667                      | 1,644        | 489          | 888          | -                 | 11   | -                     | 3            | 14           | 9            |
| Ohio           | 35                         | 62           | 194                        | 210          | 43           | 50           | U                 | -    | U                     | 1            | 1            | -            |
| Ind.           | 27                         | 11           | 98                         | 182          | 61           | 69           | -                 | 2    | -                     | 1            | 3            | -            |
| Ill.           | 30                         | 27           | 273                        | 423          | 90           | 171          | -                 | -    | -                     | -            | -            | 7            |
| Mich.          | 3                          | 14           | 989                        | 707          | 253          | 258          | -                 | 9    | -                     | 1            | 10           | 2            |
| Wis.           | 4                          | -            | 113                        | 122          | 22           | 340          | -                 | -    | -                     | -            | -            | -            |
| W.N. CENTRAL   | 63                         | 34           | 964                        | 1,203        | 245          | 294          | -                 | -    | -                     | -            | -            | 12           |
| Minn.          | 49                         | 25           | 79                         | 110          | 23           | 23           | -                 | -    | -                     | -            | -            | 3            |
| Iowa           | 1                          | 3            | 382                        | 207          | 37           | 21           | U                 | -    | U                     | -            | -            | -            |
| Mo.            | 8                          | 3            | 391                        | 631          | 151          | 218          | U                 | -    | U                     | -            | -            | 1            |
| N. Dak.        | -                          | -            | 3                          | 10           | 4            | 3            | U                 | -    | U                     | -            | -            | -            |
| S. Dak.        | -                          | 2            | 17                         | 14           | 1            | -            | -                 | -    | -                     | -            | -            | 8            |
| Nebr.          | -                          | 1            | 24                         | 49           | 9            | 8            | -                 | -    | -                     | -            | -            | -            |
| Kans.          | 5                          | -            | 68                         | 182          | 20           | 21           | -                 | -    | -                     | -            | -            | -            |
| S. ATLANTIC    | 134                        | 106          | 1,061                      | 905          | 661          | 653          | 1                 | 3    | -                     | 5            | 8            | 8            |
| Del.           | -                          | -            | 3                          | 18           | -            | 4            | -                 | -    | -                     | 1            | 1            | -            |
| Md.            | 41                         | 44           | 193                        | 124          | 96           | 100          | -                 | -    | -                     | 1            | 1            | 2            |
| D.C.           | -                          | -            | 31                         | 15           | 7            | 24           | -                 | -    | -                     | -            | -            | 1            |
| Va.            | 13                         | 7            | 137                        | 119          | 56           | 76           | -                 | -    | -                     | 2            | 2            | 1            |
| W. Va.         | 4                          | 3            | 1                          | 6            | 4            | 9            | -                 | -    | -                     | -            | -            | -            |
| N.C.           | 19                         | 17           | 60                         | 116          | 119          | 134          | -                 | -    | -                     | -            | -            | 1            |
| S.C.           | 3                          | 8            | 18                         | 69           | 21           | 62           | -                 | -    | -                     | -            | -            | -            |
| Ge.            | 28                         | 21           | 303                        | 195          | 112          | 64           | 1                 | -    | -                     | 1            | 2            | 1            |
| Fla.           | 26                         | 11           | 315                        | 243          | 246          | 180          | -                 | 2    | -                     | -            | 2            | 2            |
| E.S. CENTRAL   | 38                         | 39           | 210                        | 382          | 225          | 388          | -                 | -    | -                     | 2            | 2            | 1            |
| Ky.            | 6                          | 6            | 14                         | 47           | 24           | 26           | -                 | -    | -                     | -            | -            | -            |
| Tenn.          | 24                         | 23           | 147                        | 238          | 168          | 261          | -                 | -    | -                     | -            | -            | -            |
| Ala.           | 8                          | 8            | 49                         | 58           | 33           | 42           | -                 | -    | -                     | 2            | 2            | 1            |
| Miss.          | U                          | 2            | U                          | 39           | U            | 59           | U                 | U    | U                     | U            | U            | -            |
| W.S. CENTRAL   | 38                         | 33           | 2,406                      | 3,294        | 773          | 677          | -                 | -    | -                     | -            | -            | 5            |
| Ark.           | -                          | 2            | 58                         | 135          | 52           | 47           | U                 | -    | U                     | -            | -            | -            |
| La.            | 18                         | 7            | 50                         | 117          | 58           | 82           | -                 | -    | -                     | -            | -            | -            |
| Okla.          | 18                         | 22           | 338                        | 945          | 52           | 25           | -                 | -    | -                     | -            | -            | -            |
| Tex.           | 2                          | 2            | 1,960                      | 2,097        | 611          | 523          | -                 | -    | -                     | -            | -            | 5            |
| MOUNTAIN       | 73                         | 64           | 2,014                      | 2,403        | 507          | 501          | -                 | -    | -                     | -            | -            | 7            |
| Mont.          | -                          | -            | 66                         | 53           | 3            | 6            | -                 | -    | -                     | -            | -            | -            |
| Idaho          | -                          | 1            | 160                        | 83           | 19           | 16           | -                 | -    | -                     | -            | -            | -            |
| Wyo.           | 1                          | 2            | 25                         | 20           | 2            | 14           | -                 | -    | -                     | -            | -            | -            |
| Colo.          | 15                         | 10           | 157                        | 258          | 65           | 96           | -                 | -    | -                     | -            | -            | -            |
| N. Mex.        | 5                          | 7            | 95                         | 191          | 213          | 165          | -                 | -    | -                     | -            | -            | -            |
| Ariz.          | 41                         | 27           | 1,309                      | 1,173        | 133          | 112          | -                 | -    | -                     | -            | -            | 5            |
| Utah           | 4                          | 3            | 128                        | 377          | 43           | 59           | -                 | -    | -                     | -            | -            | -            |
| Nev.           | 7                          | 14           | 74                         | 248          | 29           | 33           | -                 | -    | -                     | -            | -            | 2            |
| PACIFIC        | 78                         | 156          | 3,296                      | 4,430        | 1,012        | 1,059        | -                 | 3    | -                     | 3            | 6            | 16           |
| Wash.          | 7                          | 2            | 648                        | 305          | 69           | 47           | -                 | -    | -                     | 1            | 1            | -            |
| Oreg.          | 32                         | 25           | 229                        | 226          | 69           | 65           | -                 | -    | -                     | -            | -            | -            |
| Calif.         | 31                         | 121          | 2,382                      | 3,786        | 863          | 928          | -                 | 3    | -                     | 2            | 5            | 12           |
| Alaska         | 1                          | 2            | 14                         | 24           | 6            | 11           | -                 | -    | -                     | -            | -            | -            |
| Hawaii         | 7                          | 6            | 23                         | 89           | 5            | 8            | -                 | -    | -                     | -            | -            | 4            |
| Guam           | -                          | -            | -                          | -            | -            | 3            | U                 | -    | U                     | -            | -            | -            |
| P.R.           | 2                          | -            | 34                         | 193          | 257          | 440          | -                 | -    | -                     | -            | -            | -            |
| V.I.           | U                          | U            | U                          | U            | U            | U            | U                 | U    | U                     | U            | U            | U            |
| Amer. Samoa    | U                          | U            | U                          | U            | U            | U            | U                 | U    | U                     | U            | U            | U            |
| C.N.M.I.       | -                          | 6            | 1                          | 1            | 28           | 34           | U                 | -    | U                     | -            | -            | 1            |

N: Not notifiable U: Unavailable - : no reported cases

\*Of 148 cases among children aged <5 years, serotype was reported for 81 and of those, 33 were type b.

<sup>d</sup>For imported measles, cases include only those resulting from importation from other countries.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending August 1, 1998, and July 26, 1997 (30th Week)

| Reporting Area | Meningococcal Disease |           | Mumps |           |           | Pertussis |           |           | Rubella |           |           |
|----------------|-----------------------|-----------|-------|-----------|-----------|-----------|-----------|-----------|---------|-----------|-----------|
|                | Cum. 1998             | Cum. 1997 | 1998  | Cum. 1998 | Cum. 1997 | 1998      | Cum. 1998 | Cum. 1997 | 1998    | Cum. 1998 | Cum. 1997 |
| UNITED STATES  | 1,684                 | 2,175     | 3     | 282       | 381       | 108       | 2,714     | 3,034     | 3       | 293       | 123       |
| NEW ENGLAND    | 74                    | 138       | 1     | 2         | 7         | 9         | 475       | 597       | -       | 36        | 1         |
| Maine          | 5                     | 15        | -     | -         | -         | -         | 5         | 6         | -       | -         | -         |
| N.H.           | 4                     | 12        | -     | -         | -         | 1         | 40        | 70        | -       | -         | -         |
| Vt.            | 1                     | 2         | -     | -         | -         | 3         | 47        | 180       | -       | -         | -         |
| Mass.          | 36                    | 70        | -     | 1         | 2         | 5         | 353       | 318       | -       | 6         | 1         |
| R.I.           | 3                     | 11        | -     | -         | 4         | -         | 5         | 12        | -       | 1         | -         |
| Conn.          | 25                    | 28        | 1     | 1         | 1         | -         | 25        | 11        | -       | 29        | -         |
| MID. ATLANTIC  | 155                   | 229       | -     | 17        | 44        | 8         | 306       | 228       | 2       | 123       | 28        |
| Upstate N.Y.   | 39                    | 64        | -     | 3         | 9         | 8         | 157       | 86        | 2       | 168       | 4         |
| N.Y. City      | 18                    | 40        | -     | 4         | 3         | -         | 9         | 53        | -       | 9         | 24        |
| N.J.           | 42                    | 43        | -     | 2         | 7         | -         | 5         | 11        | -       | 4         | -         |
| Pa.            | 56                    | 82        | -     | 8         | 25        | -         | 135       | 78        | -       | 1         | -         |
| E.N. CENTRAL   | 259                   | 320       | 1     | 50        | 49        | 7         | 235       | 300       | -       | -         | 5         |
| Ohio           | 92                    | 117       | U     | 20        | 18        | U         | 79        | 88        | U       | -         | -         |
| Ind.           | 48                    | 35        | -     | 5         | 6         | 1         | 69        | 35        | -       | -         | -         |
| Ill.           | 64                    | 92        | -     | 8         | 8         | 5         | 32        | 42        | -       | -         | 1         |
| Mich.          | 31                    | 47        | 1     | 19        | 14        | 1         | 38        | 31        | -       | -         | -         |
| Wis.           | 24                    | 29        | -     | -         | 3         | -         | 17        | 104       | -       | -         | 4         |
| W.N. CENTRAL   | 141                   | 163       | -     | 20        | 12        | 2         | 212       | 185       | -       | 27        | -         |
| Minn.          | 25                    | 29        | -     | 10        | 5         | 2         | 132       | 119       | -       | -         | -         |
| Iowa           | 23                    | 37        | U     | 8         | 6         | U         | 40        | 9         | U       | -         | -         |
| Mo.            | 53                    | 71        | U     | 9         | -         | U         | 16        | 33        | U       | 2         | -         |
| N. Dak.        | 2                     | 1         | U     | 1         | -         | U         | -         | 1         | U       | -         | -         |
| S. Dak.        | 6                     | 4         | -     | -         | -         | -         | 6         | 3         | -       | -         | -         |
| Nebr.          | 7                     | 6         | -     | -         | 1         | -         | 8         | 4         | -       | -         | -         |
| Kans.          | 25                    | 15        | -     | -         | -         | -         | 10        | 16        | -       | 25        | -         |
| S. ATLANTIC    | 297                   | 371       | -     | 37        | 45        | 24        | 171       | 271       | 1       | 9         | 57        |
| Del.           | 1                     | 5         | -     | -         | -         | -         | 2         | -         | -       | -         | -         |
| Md.            | 24                    | 36        | -     | -         | 1         | 1         | 31        | 83        | -       | -         | -         |
| D.C.           | -                     | 5         | -     | -         | -         | -         | 1         | 3         | -       | -         | -         |
| Va.            | 24                    | 36        | -     | 5         | 7         | -         | 7         | 32        | -       | -         | 1         |
| W. Va.         | 10                    | 14        | -     | -         | -         | -         | 1         | 5         | -       | -         | -         |
| N.C.           | 42                    | 72        | -     | 9         | 7         | 15        | 65        | 80        | 1       | 6         | 50        |
| S.C.           | 42                    | 40        | -     | 4         | 10        | 3         | 20        | 11        | -       | -         | 6         |
| Ga.            | 65                    | 73        | -     | 1         | 6         | 4         | 10        | 8         | -       | -         | -         |
| Fla.           | 89                    | 90        | -     | 18        | 14        | 1         | 34        | 49        | -       | 3         | -         |
| E.S. CENTRAL   | 119                   | 157       | -     | 6         | 19        | 1         | 59        | 66        | -       | 1         | 1         |
| Ky.            | 19                    | 38        | -     | -         | 3         | -         | 22        | 20        | -       | -         | -         |
| Tenn.          | 46                    | 55        | -     | 1         | 3         | 1         | 20        | 25        | -       | -         | -         |
| Ala.           | 54                    | 47        | -     | 5         | 6         | -         | 17        | 15        | -       | 1         | 1         |
| Miss.          | U                     | 17        | U     | U         | 7         | U         | U         | 6         | U       | U         | -         |
| W.S. CENTRAL   | 191                   | 201       | -     | 40        | 44        | 3         | 195       | 121       | -       | 79        | 3         |
| Ark.           | 23                    | 25        | U     | -         | 1         | U         | 26        | 9         | U       | -         | -         |
| La.            | 40                    | 43        | -     | 8         | 11        | -         | 2         | 12        | -       | -         | -         |
| Okla.          | 29                    | 24        | -     | -         | -         | -         | 18        | 17        | -       | -         | -         |
| Tex.           | 99                    | 109       | -     | 32        | 32        | 3         | 149       | 83        | -       | 79        | 3         |
| MOUNTAIN       | 97                    | 126       | -     | 24        | 48        | 15        | 577       | 758       | -       | 5         | 5         |
| Mont.          | 3                     | 7         | -     | -         | -         | -         | 3         | 9         | -       | -         | -         |
| Idaho          | 6                     | 8         | -     | 3         | 2         | -         | 193       | 458       | -       | -         | 1         |
| Wyo.           | 4                     | 1         | -     | 1         | -         | -         | 7         | 5         | -       | -         | -         |
| Colo.          | 19                    | 33        | -     | 6         | 3         | 2         | 127       | 204       | -       | -         | -         |
| N. Mex.        | 17                    | 21        | N     | N         | N         | 1         | 70        | 39        | -       | 1         | -         |
| Ariz.          | 33                    | 32        | -     | 5         | 31        | 7         | 129       | 23        | -       | 1         | 4         |
| Utah           | 11                    | 11        | -     | 3         | 6         | 5         | 35        | 10        | -       | 2         | -         |
| Nev.           | 4                     | 13        | -     | 6         | 5         | -         | 13        | 10        | -       | 1         | -         |
| PACIFIC        | 351                   | 472       | 1     | 86        | 113       | 39        | 484       | 508       | -       | 13        | 23        |
| Wash.          | 48                    | 56        | -     | 6         | 13        | 33        | 185       | 212       | -       | 9         | 5         |
| Oreg.          | 56                    | 93        | N     | N         | N         | 2         | 30        | 22        | -       | -         | -         |
| Calif.         | 242                   | 319       | 1     | 63        | 82        | 3         | 261       | 256       | -       | 2         | 10        |
| Alaska         | 1                     | 1         | -     | 2         | 5         | 1         | 3         | 4         | -       | -         | -         |
| Hawaii         | 4                     | 3         | -     | 15        | 13        | -         | 5         | 14        | -       | 2         | 8         |
| Guam           | -                     | 1         | U     | -         | 1         | U         | -         | -         | U       | -         | -         |
| P.R.           | 6                     | 8         | -     | 1         | 5         | -         | 2         | -         | -       | -         | -         |
| V.I.           | U                     | U         | U     | U         | U         | U         | U         | U         | U       | U         | U         |
| Amer. Samoa    | U                     | U         | U     | U         | U         | U         | U         | U         | U       | U         | U         |
| C.N.M.I.       | -                     | -         | U     | 2         | 4         | U         | 1         | -         | U       | -         | -         |

N: Not notifiable

U: Unavailable

&lt;: no reported cases

TABLE IV. Deaths in 122 U.S. cities,\* week ending August 1, 1998 (30th Week)

| Reporting Area      | All Causes, By Age (Years) |       |       |       |      |    | P&I <sup>†</sup> Total | Reporting Area          | All Causes, By Age (Years) |       |       |       |      |     | P&I <sup>†</sup> Total |  |
|---------------------|----------------------------|-------|-------|-------|------|----|------------------------|-------------------------|----------------------------|-------|-------|-------|------|-----|------------------------|--|
|                     | All Ages                   | >85   | 45-64 | 25-44 | 1-24 | <1 |                        |                         | All Ages                   | >85   | 45-64 | 25-44 | 1-24 | <1  |                        |  |
| NEW ENGLAND         | 553                        | 396   | 97    | 43    | 6    | 11 | 32                     | S. ATLANTIC             | 1,016                      | 666   | 202   | 97    | 30   | 21  | 61                     |  |
| Boston, Mass.       | 160                        | 108   | 32    | 13    | 3    | 4  | 10                     | Atlanta, Ga.            | U                          | U     | U     | U     | U    | U   | U                      |  |
| Bridgeport, Conn.   | 40                         | 30    | 9     | 1     | -    | -  | 3                      | Baltimore, Md.          | 182                        | 108   | 37    | 27    | 7    | 3   | 13                     |  |
| Cambridge, Mass.    | 16                         | 10    | 5     | 1     | -    | -  | 1                      | Charlotte, N.C.         | 89                         | 55    | 23    | 5     | 2    | 4   | 8                      |  |
| Fall River, Mass.   | 31                         | 28    | 1     | 1     | 1    | -  | 3                      | Jacksonville, Fla.      | 106                        | 72    | 16    | 9     | 5    | 4   | 3                      |  |
| Hartford, Conn.     | 42                         | 29    | 6     | 4     | 1    | 2  | 1                      | Miami, Fla.             | 94                         | 67    | 16    | 9     | 2    | -   | 1                      |  |
| Lowell, Mass.       | 17                         | 12    | 4     | 1     | -    | -  | 2                      | Norfolk, Va.            | 51                         | 34    | 7     | 6     | 1    | 3   | 3                      |  |
| Lynn, Mass.         | 5                          | 4     | 1     | -     | -    | -  | -                      | Richmond, Va.           | 58                         | 33    | 15    | 3     | 4    | 3   | 3                      |  |
| New Bedford, Mass.  | 26                         | 19    | 4     | 3     | -    | -  | -                      | Savannah, Ga.           | 59                         | 42    | 13    | 2     | 2    | -   | 3                      |  |
| New Haven, Conn.    | 38                         | 18    | 10    | 7     | 1    | 2  | 1                      | St. Petersburg, Fla.    | 76                         | 63    | 9     | 2     | 1    | 1   | 8                      |  |
| Providence, R.I.    | 58                         | 47    | 3     | 7     | -    | 1  | -                      | Tampa, Fla.             | 153                        | 109   | 28    | 11    | 3    | 2   | 13                     |  |
| Somerville, Mass.   | 4                          | 3     | 1     | -     | -    | -  | -                      | Washington, D.C.        | 131                        | 72    | 36    | 19    | 3    | 1   | 7                      |  |
| Springfield, Mass.  | 31                         | 25    | 4     | 2     | -    | -  | 1                      | Wilmington, Del.        | 17                         | 11    | 2     | 4     | -    | -   | 1                      |  |
| Waterbury, Conn.    | 28                         | 22    | 6     | -     | -    | -  | 1                      | E.S. CENTRAL            | 865                        | 607   | 157   | 58    | 22   | 19  | 50                     |  |
| Worcester, Mass.    | 57                         | 41    | 11    | 3     | -    | 2  | 9                      | Birmingham, Ala.        | 184                        | 130   | 35    | 13    | 3    | 1   | 11                     |  |
| MID. ATLANTIC       | 2,158                      | 1,400 | 426   | 190   | 36   | 46 | 84                     | Chattanooga, Tenn.      | 85                         | 47    | 11    | 3     | 2    | 2   | 4                      |  |
| Albany, N.Y.        | 43                         | 29    | 8     | 4     | -    | 2  | -                      | Knoxville, Tenn.        | 91                         | 64    | 16    | 6     | 2    | 3   | 5                      |  |
| Allentown, Pa.      | 19                         | 17    | 2     | -     | -    | -  | -                      | Lexington, Ky.          | 87                         | 65    | 16    | 3     | 2    | 1   | 7                      |  |
| Buffalo, N.Y.       | 92                         | 65    | 19    | 4     | 2    | 2  | -                      | Memphis, Tenn.          | 186                        | 134   | 29    | 12    | 5    | 6   | 18                     |  |
| Camden, N.J.        | 26                         | 15    | 4     | 4     | -    | 3  | 2                      | Mobile, Ala.            | 57                         | 39    | 13    | 3     | 2    | -   | -                      |  |
| Elizabeth, N.J.     | 12                         | 9     | 1     | 2     | -    | -  | -                      | Montgomery, Ala.        | 29                         | 16    | 8     | 3     | 1    | 1   | -                      |  |
| Erie, Pa.           | 39                         | 32    | 5     | 1     | -    | 1  | 1                      | Nashville, Tenn.        | 166                        | 112   | 29    | 15    | 6    | 5   | 5                      |  |
| Jersey City, N.J.   | 23                         | 14    | 5     | 3     | 1    | -  | -                      | W.S. CENTRAL            | 1,481                      | 933   | 334   | 122   | 49   | 43  | 76                     |  |
| New York City, N.Y. | 1,100                      | 746   | 213   | 98    | 21   | 23 | 38                     | Austin, Tex.            | 69                         | 42    | 19    | 6     | 1    | 1   | 5                      |  |
| Newark, N.J.        | 47                         | 17    | 12    | 15    | -    | 3  | 1                      | Baton Rouge, La.        | 20                         | 13    | 4     | 2     | 1    | -   | -                      |  |
| Paterson, N.J.      | 14                         | 7     | 5     | 2     | -    | -  | -                      | Corpus Christi, Tex.    | 50                         | 32    | 12    | 2     | 1    | 3   | 2                      |  |
| Philadelphia, Pa.   | 399                        | 244   | 94    | 41    | 9    | 11 | 16                     | Dallas, Tex.            | 199                        | 118   | 36    | 26    | 9    | 10  | 4                      |  |
| Pittsburgh, Pa.     | 53                         | 39    | 10    | 2     | 2    | -  | 1                      | El Paso, Tex.           | 62                         | 45    | 9     | 4     | 2    | 2   | 3                      |  |
| Reading, Pa.        | 28                         | 23    | 4     | 1     | -    | -  | 2                      | Ft. Worth, Tex.         | 138                        | 79    | 37    | 10    | 6    | 6   | 7                      |  |
| Rochester, N.Y.     | 121                        | 93    | 20    | 6     | 1    | 1  | 12                     | Houston, Tex.           | 380                        | 232   | 97    | 32    | 14   | 5   | 21                     |  |
| Schenectady, N.Y.   | 18                         | 15    | 3     | -     | -    | -  | 2                      | Little Rock, Ark.       | 69                         | 38    | 19    | 7     | -    | 5   | 6                      |  |
| Scranton, Pa.       | 30                         | 25    | 4     | 1     | -    | -  | 1                      | New Orleans, La.        | 94                         | 60    | 17    | 14    | 3    | -   | -                      |  |
| Syracuse, N.Y.      | 55                         | 42    | 9     | 4     | -    | -  | 7                      | San Antonio, Tex.       | 182                        | 125   | 41    | 6     | 4    | 7   | 11                     |  |
| Trenton, N.J.       | 26                         | 19    | 5     | 2     | -    | -  | 1                      | Shreveport, La.         | 99                         | 67    | 19    | 7     | 5    | 1   | 10                     |  |
| Utica, N.Y.         | 13                         | 10    | 3     | -     | -    | -  | -                      | Tulsa, Okla.            | 119                        | 82    | 24    | 7     | 3    | 3   | 7                      |  |
| Yonkers, N.Y.       | U                          | U     | U     | U     | U    | U  | U                      | MOUNTAIN                | 1,417                      | 945   | 244   | 137   | 49   | 39  | 88                     |  |
| E.N. CENTRAL        | 1,516                      | 1,042 | 278   | 115   | 37   | 44 | 67                     | Albuquerque, N.M.       | 104                        | 68    | 23    | 11    | 2    | -   | 1                      |  |
| Akron, Ohio         | 51                         | 39    | 11    | -     | 1    | -  | -                      | Boise, Idaho            | 44                         | 26    | 12    | 2     | 2    | 2   | 2                      |  |
| Canton, Ohio        | 23                         | 17    | 6     | -     | -    | -  | -                      | Colorado Springs, Colo. | 58                         | 37    | 15    | 5     | 1    | -   | 1                      |  |
| Chicago, Ill.       | U                          | U     | U     | U     | U    | U  | U                      | Denver, Colo.           | 99                         | 64    | 12    | 9     | 6    | 8   | 6                      |  |
| Cincinnati, Ohio    | 78                         | 51    | 14    | 6     | 3    | 4  | 8                      | Las Vegas, Nev.         | 189                        | 119   | 43    | 16    | 9    | 2   | 12                     |  |
| Cleveland, Ohio     | 152                        | 107   | 29    | 7     | 4    | 5  | 2                      | Ogden, Utah             | 41                         | 32    | 7     | 2     | -    | -   | 1                      |  |
| Columbus, Ohio      | 219                        | 148   | 40    | 19    | 6    | 6  | 18                     | Phoenix, Ariz.          | 632                        | 416   | 97    | 70    | 21   | 25  | 45                     |  |
| Dayton, Ohio        | 124                        | 89    | 30    | 10    | 4    | 1  | 11                     | Pueblo, Colo.           | 25                         | 20    | 4     | -     | 1    | -   | -                      |  |
| Detroit, Mich.      | 179                        | 102   | 42    | 28    | 3    | 4  | 3                      | Salt Lake City, Utah    | 110                        | 77    | 15    | 13    | 4    | 1   | 11                     |  |
| Evansville, Ind.    | 59                         | 44    | 9     | 5     | 1    | -  | 2                      | Tucson, Ariz.           | 115                        | 86    | 16    | 9     | 3    | 1   | 9                      |  |
| Fort Wayne, Ind.    | 55                         | 37    | 7     | 3     | 2    | 6  | 1                      | PACIFIC                 | 1,564                      | 1,094 | 297   | 93    | 45   | 33  | 135                    |  |
| Gary, Ind.          | 12                         | 6     | 2     | 2     | 2    | -  | -                      | Berkeley, Calif.        | 20                         | 13    | 5     | -     | -    | 2   | 4                      |  |
| Grand Rapids, Mich. | 75                         | 57    | 11    | 2     | 4    | 1  | 8                      | Fresno, Calif.          | 106                        | 75    | 21    | 5     | 4    | 1   | 5                      |  |
| Indianapolis, Ind.  | 168                        | 103   | 37    | 20    | 4    | 4  | -                      | Glendale, Calif.        | U                          | U     | U     | U     | U    | U   | U                      |  |
| Lansing, Mich.      | 32                         | 25    | 4     | 2     | -    | 1  | 5                      | Honolulu, Hawaii        | 61                         | 40    | 11    | 5     | 4    | 1   | 3                      |  |
| Milwaukee, Wis.     | 109                        | 77    | 18    | 7     | -    | 9  | 1                      | Long Beach, Calif.      | 63                         | 39    | 13    | 3     | 1    | 7   | 9                      |  |
| Peoria, Ill.        | 38                         | 33    | 2     | -     | 1    | 2  | 6                      | Los Angeles, Calif.     | U                          | U     | U     | U     | U    | U   | U                      |  |
| Rockford, Ill.      | 43                         | 28    | 12    | 3     | -    | 2  | -                      | Pasadena, Calif.        | 28                         | 18    | 9     | 1     | -    | -   | 4                      |  |
| South Bend, Ind.    | 42                         | 34    | 6     | -     | 1    | 1  | -                      | Portland, Ore.          | 299                        | 208   | 65    | 4     | 16   | 6   | 21                     |  |
| Toledo, Ohio        | U                          | U     | U     | U     | U    | U  | U                      | Sacramento, Calif.      | 212                        | 160   | 28    | 16    | 5    | 3   | 28                     |  |
| Youngstown, Ohio    | 57                         | 45    | 10    | 1     | 1    | -  | -                      | San Diego, Calif.       | 137                        | 97    | 22    | 14    | -    | 3   | 16                     |  |
| W.N. CENTRAL        | 722                        | 516   | 136   | 56    | 16   | 12 | 39                     | San Francisco, Calif.   | 149                        | 107   | 31    | 9     | 1    | 1   | 15                     |  |
| Des Moines, Iowa    | U                          | U     | U     | U     | U    | U  | U                      | San Jose, Calif.        | 191                        | 132   | 38    | 16    | 2    | 3   | 16                     |  |
| Duluth, Minn.       | 18                         | 12    | 4     | -     | 2    | -  | 1                      | Santa Cruz, Calif.      | 28                         | 22    | 4     | 1     | 1    | -   | 2                      |  |
| Kansas City, Kans.  | 25                         | 13    | 8     | -     | 3    | 1  | -                      | Seattle, Wash.          | 138                        | 84    | 30    | 14    | 8    | 2   | 6                      |  |
| Kansas City, Mo.    | 130                        | 82    | 25    | 13    | 2    | 2  | 6                      | Spokane, Wash.          | 44                         | 33    | 5     | 2     | -    | 3   | -                      |  |
| Lincoln, Neb.       | 33                         | 24    | 8     | 1     | -    | -  | 2                      | Tacoma, Wash.           | 88                         | 66    | 15    | 3     | 3    | 1   | 7                      |  |
| Minneapolis, Minn.  | 170                        | 129   | 32    | 5     | 2    | 2  | 8                      | TOTAL                   | 11,292 <sup>†</sup>        | 7,859 | 2,171 | 891   | 290  | 268 | 632                    |  |
| Omaha, Neb.         | 77                         | 59    | 10    | 3     | 2    | 3  | 8                      |                         |                            |       |       |       |      |     |                        |  |
| St. Louis, Mo.      | 94                         | 69    | 17    | 5     | 1    | 2  | 2                      |                         |                            |       |       |       |      |     |                        |  |
| St. Paul, Minn.     | 98                         | 75    | 14    | 5     | 3    | 1  | 7                      |                         |                            |       |       |       |      |     |                        |  |
| Wichita, Kans.      | 77                         | 53    | 18    | 4     | 1    | 1  | 5                      |                         |                            |       |       |       |      |     |                        |  |

U: Unavailable - : no reported cases

\*Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

\*Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†Total includes unknown ages.

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The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format and on a paid subscription basis for paper copy. To receive an electronic copy on Friday of each week, send an e-mail message to [listserv@listserv.cdc.gov](mailto:listserv@listserv.cdc.gov). The body content should read *SUBscribe mmwr-toc*. Electronic copy also is available from CDC's World-Wide Web server at <http://www.cdc.gov/> or from CDC's file transfer protocol server at <ftp.cdc.gov>. To subscribe for paper copy, contact Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 512-1800.

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Address inquiries about the *MMWR* Series, including material to be considered for publication, to: Editor, *MMWR* Series, Mailstop C-08, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333; telephone (888) 232-3228.

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☆U.S. Government Printing Office: 1998-633-228/87019 Region IV

Official Business  
Penalty for Private Use \$300  
Return Service Requested

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